



Patent
Attorney's Docket No. 013550-129

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

UTILITY PATENT
APPLICATION TRANSMITTAL LETTER



Box PATENT APPLICATION
Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

Enclosed for filing is the utility patent application
of 1) Rebecca E. WHITMORE, 2) Debra D. BOWERS
for HEAT SEALABLE SANDWICH WRAP AND A METHOD OF WRAPPING A SANDWICH

Also enclosed are:

- ☒ Four sheet(s) of ☐ formal ☒ informal drawing(s);
- ☐ a claim for foreign priority under 35 U.S.C. §§ 119 and/or 365 is ☐ hereby made to
filed on _____;
☐ in the declaration;
- ☐ a certified copy of the priority document;
- ☐ a General Authorization for Petitions for Extensions of Time and Payment of Fees;
- ☐ _____ statement(s) claiming small entity status;
- ☐ an Assignment document;
- ☐ an Information Disclosure Statement; and
- ☐ Other: _____
- ☒ An ☐ executed ☒ unexecuted declaration of the inventor(s)
☒ also is enclosed ☐ will follow.
- ☐ Please amend the specification by inserting before the first line the sentence --This
application claims priority under 35 U.S.C. §§119 and/or 365 to _ filed in _ on _; the
entire content of which is hereby incorporated by reference.--



21839

☐ A bibliographic data entry sheet is enclosed.

☒ The filing fee has been calculated as follows ☐ and in accordance with the enclosed preliminary amendment:

CLAIMS					
	NO. OF CLAIMS		EXTRA CLAIMS	RATE	FEE
Basic Application Fee					\$690.00 (101)
Total Claims	24	MINUS 20 =	---	x \$18.00 (103)	72.00
Independent Claims	3	MINUS 3 =	---	x \$78.00 (102)	---
If multiple dependent claims are presented, add \$260.00 (104)					---
Total Application Fee					762.00
If verified Statement claiming small entity status is enclosed, subtract 50% of Total Application Fee					---
Add Assignment Recording Fee if Assignment document is enclosed					---
TOTAL APPLICATION FEE DUE					762.00

☐ This application is being filed without a filing fee. Issuance of a Notice to File Missing Parts of Application is respectfully requested.

☒ A check in the amount of \$ 762.00 is enclosed for the fee due.

☐ Charge \$ _____ to Deposit Account No. 02-4800 for the fee due.

☒ The Commissioner is hereby authorized to charge any appropriate fees under 37 C.F.R. §§ 1.16, 1.17 and 1.21 that may be required by this paper, and to credit any overpayment, to Deposit Account No. 02-4800. This paper is submitted in duplicate.

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Date: August 9, 2000

By: 

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HEAT SEALABLE SANDWICH WRAP AND A METHOD OF WRAPPING A SANDWICH

Prior Application

5 This application claims the benefit of provisional application Serial
No. 60/149,179 filed August 17, 1999.

Background of the Invention

The present application pertains to a sandwich wrap and to a method of wrapping sandwiches.

10 Food products, such as sandwiches, that are sold in fast food-type of
restaurants are typically packaged in one of several different types of packages
to protect the food product until it is consumed. One type of package involves
the use of flat paper sheet wrap. The sandwich is placed on a flat paper sheet
which is then folded around the sandwich. The paper sheet is typically held in
place by tucking the end flaps of the sheet under the sandwich. The wrapped
15 sandwich can then be placed in a storage bin for future sale or may be placed
in a bag for being carried out of the restaurant.

It has been found, however, that when the packaged sandwich is placed
in a storage bin for later sale or in a bag for transportation and later
consumption, the paper sheet wrap has a tendency to come unwrapped. Thus,
20 the contents of the sandwich may spill-out, creating untidy and unsanitary
conditions.

Cold seal cohesives and pressure sensitive adhesives have been tested
as methods for sealing wrapped sandwiches. They all have the disadvantage of
potentially sticking together when they are not intended to, as when a pressure
25 sensitive adhesive surface comes in contact with any other surface, or when
one cohesive surface is accidentally placed in contact with another.

Therefore, it would be desirable to provide a sandwich wrap which prevents accidental unwrapping, without the problems of the types described above.

Summary of the Invention

5 The present invention relates to a sandwich wrap comprising a sheet of flexible material having a heat sealable substance coated on at least a portion of a side thereof.

10 The invention also pertains to a wrapped sandwich around which the sheet of flexible material has been wrapped such that the heat sealable substance is heat sealed to a portion of the folded sheet to resist unfolding of the sheet.

The invention also pertains to a method of wrapping a sandwich using the above-described sheet, the method comprising the steps of:

- 15 A) placing the sandwich on the sheet;
- B) folding the sheet around the sandwich such that at least a portion of the heat sealable substance contacts another part of the folded sheet; and
- C) heating that portion of the heat sealable substance to form a heat seal with the part of the sheet that it contacts.

20 The heating of the heat sealable substance can be accomplished by applying heat from outside of the wrapped sandwich, such as by placing the wrapped sandwich on a hot plate. Alternatively, the heating of the heat sealable substance can be accomplished by applying heat from within the wrapped sandwich, such as by wrapping a hot sandwich.

25 It is not necessary for all of the heat sealable substance to be heated and placed in heat seal relationship with the rest of the sheet in order to sufficiently prevent the folded wrap from becoming accidentally unfolded.

Brief Description of the Drawings

The objects and advantages of the invention will become apparent from the following detailed description of preferred embodiments thereof in connection with the accompanying drawings in which like numerals designate
5 like elements and in which:

Fig. 1 is a top plan view of a sandwich wrap according to the invention;

Fig. 2 is a view similar to Fig. 1 after a sandwich has been placed on the wrap;

Fig. 3 is a side view of Fig. 2;

10 Fig. 4 is a view similar to Fig. 2 after the wrap has been initially folded around the sandwich;

Fig. 5 is a side view of Fig. 4;

Fig. 6 is a view similar to Fig. 4 after ends of the wrap have been folded to form end flaps;

15 Fig. 7 is a side view of Fig. 6;

Fig. 8 is a view similar to Fig. 6 after the end flaps have been tucked under the sandwich;

Fig. 9 is a side view of Fig. 8.

20 Fig. 10 is a side view similar to Fig. 9 with the wrapped package seated on a heated surface;

Fig. 11 is a bottom view of the final package;

Fig. 12 is a side view of the final package;

Fig. 13 is a view, similar to Fig. 1, of another embodiment of the present invention; and

25 Figs. 14-16 are views depicting the use of the embodiment of Fig. 13.

Detailed Description of Preferred Embodiments of the Invention

Depicted in Fig. 1 is a sheet 10 of a sandwich wrap that comprises a substrate 11 coated on one side with a heat sealable coating 12, i.e., a material that becomes adhesive only when heated to a certain temperature. The substrate 11 can be any type of material that is flexible enough to be folded around a sandwich, such as paper, or polymer film, or a multi-ply sheet formed of paper and polymer plies. The heat sealable coating 12 can comprise any suitable type coating, such as hot melt adhesives, water dispersed acrylics or EAA's (ethylene acrylic acid), etc. The coating 12 can be applied over any part or all of the side of the sheet. In Fig. 1 the coating 12 is shown as applied as a peripheral edge band. Alternatively, other portions, or the entire side could be so coated.

In use, the sandwich is placed on the wrap, i.e. on the side having the coating or on the other side. Then, the wrap is folded around a sandwich 13 in any conventional manner, such as by the methods described below. In Figs. 2-9 a first technique is depicted wherein the wrap is folded along its center so that opposite edges 14, 16 of the wrap come into overlapping relationship on top of the sandwich, with the wrap now forming opposing ends 18, 20 extending past the sandwich (see Figs. 4 and 5). The edges of each of those ends are now folded together to form end flaps 22, 24 as shown in Figs. 6 and 7. The end flaps 22, 24 are then tucked beneath the sandwich as depicted in Figs. 8 and 9.

The sandwich is then placed upon a heated surface 26 which is sufficiently hot to cause the coating 12 to become adhesive. (This effect can be assisted by heat from the sandwich if a heated sandwich is being wrapped.) For example, some fast food restaurants typically include hot plates or heated surfaces on which hot sandwiches, such as hamburgers, are kept until being

given to a customer. Such heated surfaces can be, e.g., 120° F. which is hot enough to make the coating 12 become adhesive.

After a matter of only seconds on such a heated surface, the adhesive closest to the heated surface is activated, causing each of the folded flaps 22, 24 to seal itself up, resulting in a sealed package P, see Figs. 11 and 12.

The thus-sealed package P can be placed in a bag for removal from the restaurant. The package will not open during insertion or removal from the bag, keeping the sandwich contents sanitary and neatly arranged.

The sealed package can be easily opened, because a top portion of the wrap remote from the heated surface, which includes the edge 14 (see Fig. 8), will not have become sealed together. Instead, that portion can be peeled away, to gain access to the sandwich inside.

Furthermore, when a portion of the wrap is peeled away, the remaining portion forms a pouch which helps keep the sandwich contents intact during consumption. This allows the customer to gain access to the wrapped sandwich easily and consume the sandwich with one hand if necessary, such as during the driving of a car.

Depending upon the bond strength of the chosen adhesive, the seal can be made permanent (requiring that the wrap be torn to release the sealed flaps), or the seal can be made releasable with pulling pressure. Also, the temperature of activation can be regulated by the choice of adhesive.

In one example of a sandwich wrap according to the invention a metallized polyester #70 gauge film was coated completely on one side thereof with a heat seal adhesive in the form of a water based acrylic coating. A sandwich was wrapped in the film in the manner described in connection with Figs. 2-9, and the bottom portion of the wrapped package was placed for five seconds on a plate heated to 225°F. When the package was removed, each of the end flaps was sealed internally, i.e., to itself, but not to the other

end flap. The top part of the film was not sealed and was easily peeled away. When the above steps were repeated, except that the package was held against the heated surface for ten seconds, each of the end flaps was not only sealed internally, but was sealed to the other end flap.

5 When the temperature was increased to 250°F, the end flaps were sealed internally and to each other regardless of whether the package was held against the heated surface for 5 or 10 seconds.

In all cases, the top portion of the wrap did not seal and could be easily peeled away.

10 In another preferred embodiment of the invention, depicted in Figs. 13-16, a sandwich wrap 30 has a heat seal arrangement which is activated by the heat of a hot sandwich, thereby eliminating the need for a hot surface. It has been found that such a concept of utilizing heat for the sandwich to create a heat seal could be used with the sheet described in connection with Figs. 1-7, the concept works better when the heat seal 32 is applied along only two
15 opposing edges of the substrate 31, as shown in Fig. 13. The two edges most preferably constitute the edges which are overlapped when the sheet is wrapped around the sandwich 13 (i.e., the edges correspond to the edges 14 and 16 of Fig. 4). The end flaps will become sealed as a result of the heat and
20 pressure produced by the sandwich.

In all embodiments of the invention, it may be desirable to coat, with a conventional release agent, the side of the substrate that does not have the heat sealable coating 12, in order to prevent the coating 12 of each wrap from adhering to other wraps during shipping (e.g., in the event that the wrap
25 temperature becomes high enough to activate the heat sealable coating during shipment of the wraps).

Although the present invention has been described in connection with preferred embodiments thereof, it will be appreciated by those skilled in the art that additions, deletions, modifications, and substitutions not specifically described may be made without departing from the spirit and scope of the invention.

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WHAT IS CLAIMED IS:

1. A sandwich wrap comprising a sheet of flexible material having a heat sealable substance coated on at least a portion of a side thereof.
2. The sandwich wrap according to claim 1 wherein the flexible material comprises paper.
3. The sandwich wrap according to claim 1 wherein the flexible material comprises polymer film.
4. The sandwich wrap according to claim 1 wherein the flexible material comprises a multi-ply sheet formed of paper and a polymer film.
5. The sandwich wrap according to claim 1 wherein the heat sealable substance is coated along at least one edge of the side of the sheet.
6. The sandwich wrap according to claim 5 wherein the heat sealable substance is coated along at least two edges of the side of the sheet.
7. The sandwich wrap according to claim 5 wherein the sheet has four edges, and the heat sealable substance is coated along all four edges.
8. The sandwich wrap according to claim 1, wherein the heat sealable substance is coated on a first side of the sheet, the sheet being coated on a second, opposite side of the sheet with a release agent.

9. A wrapped sandwich comprising a sheet of flexible material wrapped around the sandwich and having a heat sealable substance coated on at least a portion of a side thereof, the heat sealable substance being heat sealed to a portion of the folded sheet to resist unfolding of the sheet.

5 10. The wrapped sandwich according to claim 9 wherein the flexible material is paper.

11. The wrapped sandwich according to claim 9 wherein the flexible material is polymer film.

10 12. The wrapped sandwich according to claim 9 wherein the flexible material comprises a multi-ply sheet formed of paper and a polymer film.

13. The wrapped sandwich according to claim 9 wherein the heat sealable substance is coated along at least one edge of the side of the sheet.

14. The wrapped sandwich according to claim 13 wherein the heat sealable substance is coated along at least two edges of the side of the sheet.

15 15. The wrapped sandwich according to claim 13 wherein the sheet has four edges, and the heat sealable substance is coated along all four edges.

16. The wrapped sandwich according to claim 9 wherein less than all of the heat sealable substance is in a heat sealed state.

17. The wrapped sandwich according to claim 9 wherein the heat sealable substance is coated on a first side of the sheet, the sheet being coated on a second, opposite side of the sheet with a release agent.

18. A method of wrapping a sandwich comprising the steps of:

- 5 A) placing the sandwich on a flexible sheet having a heat sealable substance coated on at least a portion of a side thereof;
- B) folding the sheet around the sandwich such that at least a portion of the heat-sealable substance contacts another part of the folded sheet; and
- 10 C) heating that portion of the heat sealable substance to form a heat seal with the part of the sheet that it contacts.

19. The method according to claim 18 wherein step C comprises applying heat from outside of the wrapped sandwich.

20. The method according to claim 19 wherein step C comprises
15 placing the wrapped sandwich on a hot plate.

21. The method according to claim 18 wherein step C comprises applying heat from within the wrapped sandwich by wrapping a hot sandwich.

22. The method according to claim 18 wherein step C comprises
20 causing less than all of the heat sealable substance to be heated sufficiently to produce a heat seal.

23. The method according to claim 18 wherein step A further comprises placing the sandwich on a sheet having the heat sealable substance coated along at least one edge thereof.

5 24. The method according to claim 18 wherein steps A and B are performed manually.

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Abstract of the Disclosure

5 A sandwich wrap includes a heat seal coating which, after a sandwich has been wrapped into a package, and heat has been applied to the heat seal coating, produces a seal that prevents the package from accidentally becoming unwrapped during handling. A portion of the wrap located remotely of the heating surface remains unsealed, and can be peeled away to gain access to the sandwich.

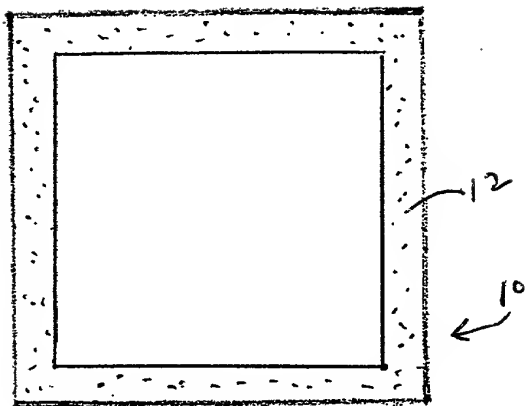


FIG. 1

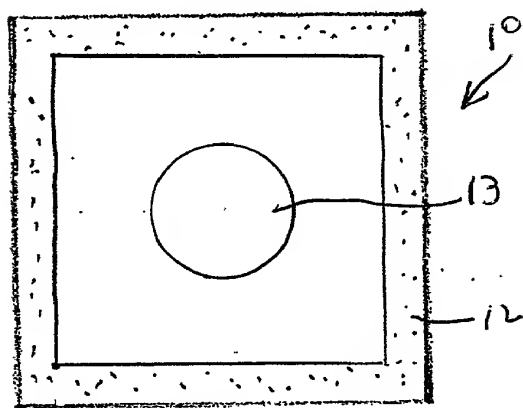


FIG. 2

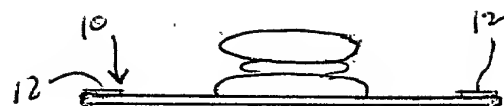


FIG. 3

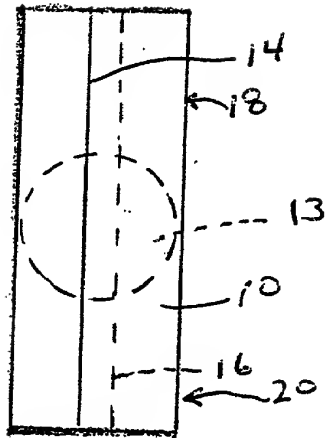


FIG. 4

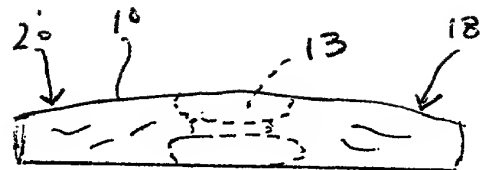


FIG. 5

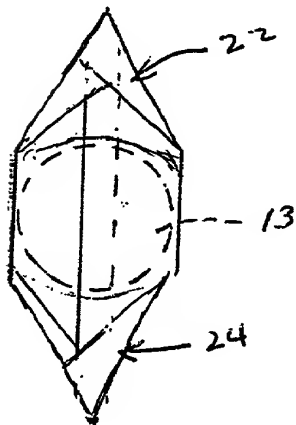


FIG. 6



FIG. 7

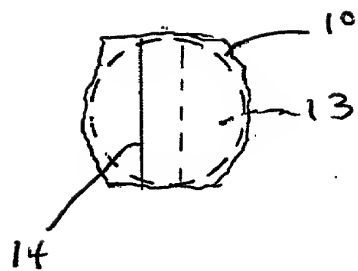


FIG. 8



FIG. 9



FIG. 10

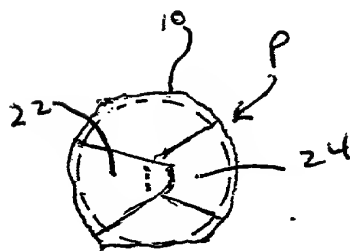


FIG. 11

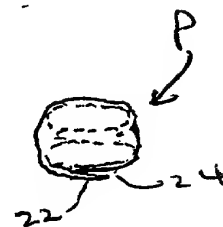


FIG. 12

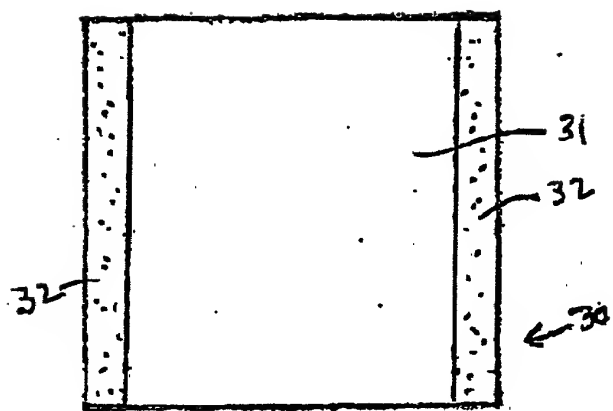


FIG. 13

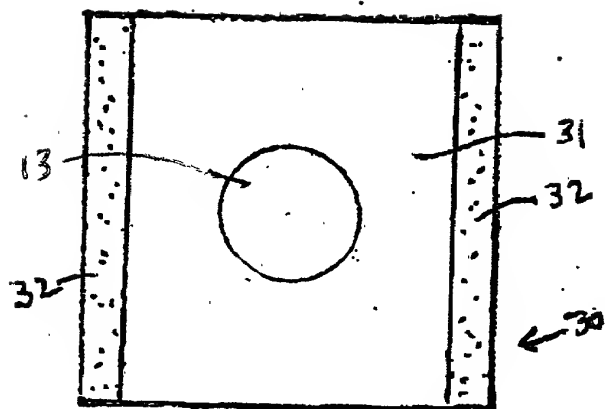


FIG. 14

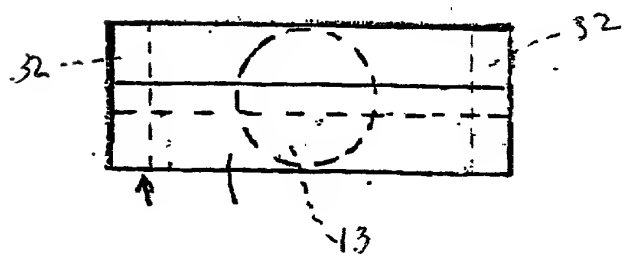


FIG. 15



FIG. 16

COMBINED DECLARATION FOR PATENT APPLICATION AND POWER OF ATTORNEY
(Includes Reference to Provisional and PCT International Applications)

Attorney's Docket No.

013550-129

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name;

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

HEAT SEALABLE SANDWICH WRAP AND A METHOD OF WRAPPING A SANDWICH

the specification of which (check only one item below):

☐ is attached hereto.

☒ was filed as United States application

Number _____

on August 9, 2000

and was amended

on _____ (if applicable).

☐ was filed as PCT international application

Number _____

on _____

and was amended

on _____ (if applicable).

COPY

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose to the Office all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, §1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, §119 (a)-(e) of any foreign application(s) for patent or inventor's certificate or of any PCT international application(s) designating at least one country other than the United States of America listed below and have also identified below any foreign application(s) for patent or inventor's certificate or any PCT international application(s) designating at least one country other than the United States of America filed by me on the same subject matter having a filing date before that of the application(s) of which priority is claimed:

PRIOR FOREIGN/PCT APPLICATION(S) AND ANY PRIORITY CLAIMS UNDER 35 U.S.C. §119:

COUNTRY (if PCT, indicate "PCT")	APPLICATION NUMBER	DATE OF FILING (day, month, year)	PRIORITY CLAIMED UNDER 35 U.S.C. §119
			<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Yes <input type="checkbox"/> No

COMBINED DECLARATION FOR PATENT APPLICATION AND POWER OF ATTORNEY (CONT'D)
(Includes Reference to Provisional and PCT International Applications)

Attorney's Docket No.

013550-129

I hereby claim the benefit under Title 35, United States Code § 119(e) of any United States provisional application(s) listed below.

60/149,179

(Application Number)

August 17, 1999

(Filing Date)

(Application Number)

(Filing Date)

I hereby claim the benefit under Title 35, United States Code, §120 of any United States applications(s) or PCT international application(s) designating the United States of America that is/are listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in that/those prior application(s) in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose to the Office all information known to me to be material to the patentability as defined in Title 37, Code of Federal Regulations §1.56, which became available between the filing date of the prior application(s) and the national or PCT international filing date of this application:

PRIOR U.S. APPLICATIONS OR PCT INTERNATIONAL APPLICATIONS DESIGNATING THE U.S. FOR BENEFIT UNDER 35 U.S.C. §120:

U.S. APPLICATIONS		STATUS (check one)		
U.S. APPLICATION NUMBER	U.S. FILING DATE	PATENTED	PENDING	ABANDONED
PCT APPLICATIONS DESIGNATING THE U.S.				
PCT APPLICATION NO.	PCT FILING DATE	U.S. APPLICATION NUMBERS ASSIGNED (if any)		

COMBINED DECLARATION FOR PATENT APPLICATION AND POWER OF ATTORNEY (CONT'D)
(Includes Reference to Provisional and PCT International Applications)

Attorney's Docket No.

013550-129

I hereby appoint the following attorneys and agent(s) to prosecute said application and to transact all business in the Patent and Trademark Office connected therewith and to file, prosecute and to transact all business in connection with international applications directed to said invention:

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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false state-ments and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

FULL NAME OF SOLE OR FIRST INVENTOR		SIGNATURE		DATE
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Chilton, WISCONSIN			U.S.	
POST OFFICE ADDRESS				
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FULL NAME OF SECOND JOINT INVENTOR, IF ANY		SIGNATURE		DATE
Debra D. BOWERS				
RESIDENCE			CITIZENSHIP	
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RESIDENCE			CITIZENSHIP	
POST OFFICE ADDRESS				